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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,520	11/03/2003	Hideki Asao	244705US2	1400
22850	7590	12/14/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, BENNY T	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire three (3) month(s), \_\_\_\_\_ day(s) from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-8 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-8 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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The disclosure is objected to because of the following informalities: Page 1, line 30 and page 2, line 27, note that "upsizing" and "downsizing" should be rewritten as --size-- at each occurrence for clarity of description. Page 2, line 11, note that "the drawing" should be rephrased as -- Fig. 12 --. Page 2, line 14 and page 6, line 4, note that "2b" should correctly be -- 3a --. Page 4, lines 27-29, note that the brief description should reference drawing Figures --4(a)-- and --4(b)--, respectively. Page 5, line 6, note that "the" should be deleted as being unnecessary. Page 7, lines 13-22, note that the reference labels therein should be associated with the drawing figure(s) in which they actually appear for clarity of description. Page 10, line 7, note that fig. 8(a) (b) (c)" should be rephrased as --Figs. 8(a), 8(b), 8(c)-- for clarity of description. Appropriate correction is required.

A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because, in addition to the above specification objections, certain lines of text throughout the specification lack adequate spacing between adjacent words therein.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification

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contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, note that "its guiding direction" lacks strict antecedent basis.

In claim 4, note that the recitation "but can be divided ...." renders the meaning of the claim vague and indefinite.

In claim 5, note that "said divided face" lacks strict antecedent basis.

The following claims have been found objectionable for reasons set forth below:

In claim 2, should "the dimension" be rephrased as --a dimension of said slit-- for a proper characterization?

In claim 4, line 1, note that "either" should be deleted as being unnecessary; line 2, note that "those" should be rephrased as --said vertical and horizontal-- and --said-- should precede the second occurrence of "polarized".

In claim 8, note that "forms" should be rewritten as --provides --.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

DeRonde.

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DeRonde (figs. 15, 16a, 16b) discloses a waveguide twist or rotator structure comprising: a waveguide (210) for propagating waves of a first (e.g. vertical) polarization; a waveguide (211) for propagating a second (e.g. horizontal) polarization orthogonal to the first polarization; and a polarization converter section (212) having a slit section comprised of two quadrate (i.e. four sided) sections connected by a narrow and straight ridge section to effect the polarization rotation (see fig. 16). As is evident from fig. 16a, the two quadrate sections are symmetrical about a vertical (i.e. "y") axis while the centers of the two quadrate sections lie along a horizontal (i.e. "x") axis. Note that as described at col. 19, lines 39, 40, the spacing between projections (222, 223) along the wave propagation direction is one-quarter wavelength.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cohn pertains to a polarization rotator comprising a slit having two sections joined together.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (571) 272-1764.

B. Lee

12/02/04



BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817